

ABSTRACT

[0038] An on-chip test mechanism for transceiver power amplifier and oscillator frequency for use with the transmitter portion of an integrated RF transceiver. The invention eliminates the need for expensive RF test equipment, permitting the use of low cost test equipment to test an integrated RF transmitter. In addition, test time spent to verify the power levels and frequency ranges of a tested transmitter is reduced, further reducing testing costs. The RF output from the power amplifier in the transmitter is input to a built-in dedicated analog comparator having a configurable threshold. The threshold is adjusted to a predetermined level at which crossings start to occur at the comparator output. The comparator outputs pulses only if the power amplifier output is above a minimum configurable level. The comparator output is input to a frequency divider whose frequency output is tested by a low cost external tester to determine the actual RF frequency thereby confirming generation of the correct oscillator frequency and that the amplitude of the signal at the output of the power amplifier is sufficiently high for the configurable threshold level to be exceeded, thereby determining the compliance of the output power with its defined specifications.